

## Woodruff Electric Cooperative

### *Woodruff Electric Advanced Metering Infrastructure Project*

#### Abstract

Woodruff Electric Cooperative's (Woodruff) Advanced Metering Infrastructure (AMI) project provides two-way communicating smart meters to all of its residential customers and selected commercial customers. The primary objective of the project is to gain efficiencies related to metering operations. The AMI system provides time-of-use data, outage information, and distribution load data, which is used to improve system reliability. In addition to the meters, Woodruff provides remote disconnect/reconnect switches that operate on the same existing power line carrier infrastructure as the smart meters and allow for bill prepay options for customers, remote firmware upgrades, and remote demand reset.

#### Smart Grid Features

**Communications infrastructure** includes the deployment of a meter communications network using a power line carrier network between the meters and substations and an Internet protocol network between the substations and the AMI head-end system. The new communications networks provide a secure infrastructure for monitoring electricity usage and distribution system conditions.

**Advanced metering infrastructure** includes deployment of 14,450 smart meters to residential and commercial customers. The deployment contributes to reduction in operational costs through the automation of meter readings and customer services activities. New AMI features, such as outage and restoration notification and a remote service switch, enable Woodruff to respond to outages and customer requests more efficiently. The remote service switches allow customers to adopt prepaid electricity services to better manage their electricity usage and corresponding costs. By integrating AMI data with the Woodruff's customer information system, outage management system, and engineering analysis application, the AMI project provides additional operational efficiencies and improved customer service. This project also allows for future enhancements such as time-based rate programs, in-home displays, and load management programs.

#### At-A-Glance

**Recipient:** Woodruff Electric Cooperative

**State:** Arkansas

**NERC Region:** SERC Reliability Corporation

**Total Budget:** \$5,016,000

**Federal Share:** \$2,357,520

**Project Type:** Advanced Metering Infrastructure

#### Equipment

- 14,450 Smart Meters
- AMI Communication Systems
  - Meter Communications Network
  - Backhaul Communications

#### Key Targeted Benefits

- Reduced Meter Reading Costs
- Reduced Operating and Maintenance Costs
- Reduced Electricity Costs for Customers
- Reduced Costs from Theft
- Improved Electric Service Reliability and Power Quality
- Reduced Truck Fleet Fuel Usage
- Reduced Greenhouse Gas and Criteria Pollutant Emissions

**Woodruff Electric Cooperative** *(continued)***Timeline**

Key Milestones	Target Dates
AMI deployment begins	Q1 2009
AMI system trial project operational	Q3 2009
AMI deployment completed	Q4 2010

**Contact Information**

Billy C. Martin, III  
President/CEO  
Woodruff Electric Cooperative  
bmartin@woodruffelectric.com